IN THE CLAIMS:

Please cancel claims 9-28 and add claims 29-39.

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29. A dry method for finishing SOI substrates, said method comprising:

providing an SOI substrate comprising a cleaved surface, said cleaved surface having a first surface roughness value;

increasing a temperature of an environment associated with said cleaved surface to about 1,000° Celsius and greater; and

contacting said cleaved surface with a hydrogen bearing environment at least when said temperature of said environment is about 1000° Celsius and greater to reduce said first surface roughness value by at least about eighty percent to a second surface roughness value, said hydrogen bearing environment including at least an HCL gas and a hydrogen gas;

whereupon the cleaved surface having the second roughness value is substantially planarized.

30. The method of claim 29 wherein the increasing the temperature is provided at a rate of about 10 Degrees Celsius per second and greater.

31. The method of claim 29 wherein said first surface roughness value is reduced by at least about ninety percent to the second roughness value.

32. The method of claim 29 wherein said HCl gas and said hydrogen gas are a ratio (HCl:H2) of about 0.001 to 30.

33. The method of claim 29, wherein said hydrogen gas and the HCl gas interact with said surface to reduce said surface roughness value.

34. The method of claim 29 wherein said first surface roughness value of said surface is reduced in a thermal processing chamber.

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35. The method of claim 29 wherein cleaved surface is provided by a controlled cleavage process.

36. The method of claim 29 wherein said substrate is a silicon wafer.

37. The method of claim 29 wherein said environment is said surface.

38. The method of claim 29 wherein said environment is a process chamber wherein said substrate is provided.

39. The method of claim 29 wherein the environment is maintained at a pressure of about 1 atomsphere.